

X-Ray Coherent Diffraction Microscopy of Extended Objects

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We report on the recent development of a lensless coherent diffraction microscopy scheme, which is based on the combination of ptychography with an iterative phase retrieval algorithm [1]. The method is not limited to a small field of view or an object of finite size and does not suffer any of the physical constraints, convergence problems, or defocus ambiguities that often arise in conventional phase-retrieval diffractive imaging techniques. Calculation times are significant shorter than in current iterative algorithms. Numerical and experimental results with hard x-rays [2] and visible laser light [3,4] will be shown.

References:

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